

WHAT IS CLAIMED IS:

1. A content usage-fee management system for performing transaction processing of content which is usable by a user device, said content usage-fee management system comprising a service provider for managing a service for the provision of the content, wherein said service provider receives a usage log from said user device, said usage log being created by said user device and including log information containing data of a content usage fee, and said service provider compares the content usage fee with a predetermined threshold value so as to determine whether the use of the content is allowed.

2. A content usage-fee management system according to claim 1, wherein said service provider comprises a user management database in which threshold data is provided for each user, and said service provider compares the content usage fee with the predetermined threshold value based on the threshold data stored in said user management database.

3. A content usage-fee management system according to claim 1, wherein, when the content usage fee exceeding the predetermined threshold is recorded in said usage log received from said user device, said service provider

requests a clearing center which manages an electronic money balance of said user device to inquire about the electronic money balance usable by said user device.

4. A content usage-fee management system according to claim 1, wherein the content is sent to said user device in the form of a secure container including the content encrypted with a content key, and said service provider sends the content key to said user device only when it is determined that the use of the content is allowed by comparing the content usage fee contained in said usage log with the predetermined threshold value.

5. A content usage-fee management system according to claim 1, wherein said user device deducts the content usage fee from an electronic money balance up to an amount of money set in an issue log based on information of a usage control policy of the content, said issue log being created by a clearing center which manages the electronic money balance of said user device, and said user device creates said usage log containing the deducted usage fee data and sends said usage log to said service provider.

6. A content usage-fee management system according to claim 1, wherein said service provider creates a receive log

including the usage fee data based on said usage log received from said user device, and sends said receive log to a clearing center which manages an electronic money balance.

7. A content usage-fee management system according to claim 1, wherein said user device stores threshold data as an upper limit of the usage fee usable by said user device, and the threshold data is checked when said usage log is created, and, when the usage fee is found to exceed the threshold data, said user device adds identification data indicating that the usage fee exceeds the threshold data to said usage log.

8. A content usage-fee management system according to claim 7, wherein, upon receiving said usage log with the identification data, said service provider requests a clearing center which manages an electronic money balance of said user device to inquire about an electronic money balance usable by said user device.

9. A content usage-fee management system according to claim 1, wherein each of said user device and said service provider comprises an encryption processing unit, and, when said usage log is sent from said user device to said service

provider, mutual authentication processing is performed between said user device and said service provider, and said user device attaches a digital signature to said usage log, and, upon receiving said usage log, said service provider verifies the integrity of the digital signature.

10. A content usage-fee management system according to claim 6, wherein each of said service provider and said clearing center comprises an encryption processing unit, and, when said receive log is sent from said service provider to said clearing center, mutual authentication processing is performed between said service provider and said clearing center, and said service provider attaches a digital signature to said receive log, and, upon receiving said receive log, said clearing center verifies the integrity of the digital signature.

11. A content usage-fee management method for performing transaction processing of content which is usable by a user device, said content usage-fee management method comprising the steps of:

receiving, by a service provider for managing a service for the provision of the content, a usage log from said user device, said usage log being created by said user device and including log information containing data of a content usage

fee; and

determining by said service provider whether the use of the content is allowed by comparing the content usage fee with a predetermined threshold value.

12. A content usage-fee management method according to claim 11, wherein said service provider comprises a user management database in which threshold data is provided for each user, and said service provider compares the content usage fee with the predetermined threshold value based on the threshold data stored in said user management database.

13. A content usage-fee management method according to claim 11, wherein, when the content usage fee exceeding the predetermined threshold is recorded in said usage log received from said user device, said service provider requests a clearing center which manages an electronic money balance of said user device to inquire about the electronic money balance usable by said user device.

14. A content usage-fee management method according to claim 11, wherein said service provider sends the content to said user device in the form of a secure container including the content encrypted with a content key, and said service provider sends the content key to said user device only when

it is determined that the use of the content is allowed by comparing the content usage fee contained in said usage log with the predetermined threshold value.

15. A content usage-fee management method according to claim 11, wherein said user device deducts the content usage fee from an electronic money balance up to an amount of money set in an issue log based on information of a usage control policy of the content, said issue log being created by a clearing center which manages the electronic money balance of said user device, and said user device creates said usage log containing the deducted usage fee data and sends said usage log to said service provider.

16. A content usage-fee management method according to claim 11, wherein said service provider creates a receive log including the usage fee data based on said usage log received from said user device, and sends said receive log to a clearing center which manages an electronic money balance.

17. A content usage-fee management method according to claim 11, wherein said user device stores threshold data as an upper limit of the usage fee usable by said user device, and the threshold data is checked when said usage log is

created, and, when the usage fee is found to exceed the threshold data, said user device adds identification data indicating that the usage fee exceeds the threshold data to said usage log.

18. A content usage-fee management method according to claim 17, wherein, upon receiving said usage log with the identification data, said service provider requests a clearing center which manages an electronic money balance of said user device to inquire about the electronic money balance usable by said user device.

19. A content usage-fee management method according to claim 11, wherein each of said user device and said service provider comprises an encryption processing unit, and, when said usage log is sent from said user device to said service provider, mutual authentication processing is performed between said user device and said service provider, and said user device attaches a digital signature to said usage log, and, upon receiving said usage log, said service provider verifies the integrity of the digital signature.

20. A content usage-fee management method according to claim 16, wherein each of said service provider and said clearing center comprises an encryption processing unit, and,

when said receive log is sent from said service provider to said clearing center, mutual authentication processing is performed between said service provider and said clearing center, and said service provider attaches a digital signature to said receive log, and, upon receiving said receive log, said clearing center verifies the integrity of the digital signature.

21. A program providing medium for providing a computer program which allows content usage-fee management processing for use in transaction processing of content usable by a user device to run on a computer system, said computer program comprising:

a step of receiving a usage log from said user device, said usage log being created by said user device and including log information containing data of a content usage fee; and

a step of determining whether the use of the content is allowed by comparing the content usage fee with a predetermined threshold value.

22. A content usage management system for performing transaction processing of content which is usable by a user device, said content usage management system comprising a clearing center for managing settlement of a content usage

fee paid by electronic money of a user, and for sending to said user device an issue log in which an effective period for the payment of the content usage fee by said user device by the electronic money is set, wherein the payment of the content usage fee by said user device is settled only when it is made within the effective period set in said issue log.

23. A content usage management system according to claim 22, wherein said clearing center comprises user management data in which user device identifiers and information of the effective period are associated with each other, and said clearing center extracts a user device having an issue log which expires soon by searching said user management data, and sends a warning message to the extracted user device to instruct the user device to renew the issue log.

24. A content usage management system according to claim 22, wherein said clearing center comprises user management data in which user device identifiers and information of the effective period are associated with each other, and said clearing center extracts a user device having an issue log which has expired by searching said user management data, and sends a warning message to the extracted user device to instruct the user device to create

a new issue log.

25. A content usage management system according to claim 22, wherein data of an allowable amount of money is set in said issue log, and said user device pays the content usage fee by the electronic money within the effective period and up to the allowable amount of money set in said issue log.

26. A content usage management system according to claim 25, wherein the effective period set in said issue log is varied according to the allowable amount of money.

27. A content usage management system according to claim 22, wherein the effective period set in said issue log is varied according to the credibility of a management user of said user device.

28. A content usage management system according to claim 22, wherein said user device checks the effective period set in said issue log when paying the content usage fee by the electronic money, and, when it is determined that said issue log has expired, said user device requests said clearing center to create a new issue log before creating a usage log for settling the usage fee, and said user device

creates said usage log based on the new issue log.

29. A content usage management system according to claim 22, wherein each of said user device and said clearing center comprises an encryption processing unit, and, when said issue log is sent from said clearing center to said user device, mutual authentication processing is performed between said user device and said clearing center, and said clearing center attaches a digital signature to said issue log, and, upon receiving said issue log, said user device verifies the integrity of the digital signature.

30. A content usage management method for performing transaction processing of content which is usable by a user device, said content usage management method comprising the steps of:

    sending from a clearing center which manages settlement of a content usage fee paid by electronic money of a user to said user device an issue log in which an effective period for the payment of the content usage fee by said user device by the electronic money is set; and

    settling the payment of the content usage fee paid by said user device only when it is made within the effective period set in said issue log.

31. A content usage management method according to claim 30, wherein said clearing center comprises user management data in which user device identifiers and information of the effective period are associated with each other, and said clearing center extracts a user device having an issue log which expires soon by searching said user management data, and sends a warning message to the extracted user device to instruct the user device to renew the issue log.

32. A content usage management method according to claim 30, wherein said clearing center comprises user management data in which user device identifiers and information of the effective period are associated with each other, and said clearing center extracts a user device having an issue log which has expired by searching said user management data, and sends a warning message to the extracted user device to instruct the user device to create a new issue log.

33. A content usage management method according to claim 30, wherein data of an allowable amount of money is set in said issue log, and said user device pays the content usage fee by the electronic money within the effective period and up to the allowable amount of money set in said

issue log.

34. A content usage management method according to claim 33, wherein the effective period set in said issue log is varied according to the allowable amount of money.

35. A content usage management method according to claim 30, wherein the effective period set in said issue log is varied according to the credibility of a management user of said user device.

36. A content usage management method according to claim 30, wherein said user device checks the effective period set in said issue log when paying the content usage fee by the electronic money, and, when it is determined that said issue log has expired, said user device requests said clearing center to create a new issue log before creating a usage log for settling the usage fee, and said user device creates said usage log based on the new issue log.

37. A content usage management method according to claim 30, wherein each of said user device and said clearing center comprises an encryption processing unit, and, when said issue log is sent from said clearing center to said user device, mutual authentication processing is performed

between said user device and said clearing center, and said clearing center attaches a digital signature to said issue log, and, upon receiving said issue log, said user device verifies the integrity of the digital signature.

38. A program providing medium for providing a computer program which allows content usage management processing for use in transaction processing of content usable by a user device to run on a computer system, said computer program comprising:

a sending step of sending an issue log in which an effective period is set to said user device; and

a settlement step of settling the payment of a content usage fee by using electronic money by said user device only when it is made within the effective period set in said issue log.